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ABSTRACT

A longitudinal study was conducted to: (1) describe characteristics of verbal interaction of children from 3 to 6 years of age with their mothers and preschool teachers; (2) analyze similarities and differences in conversational styles of mother-child and teacher-child dyads at the child's third, fourth, fifth, and sixth year; and (3) explore the relationship between parental communication strategies and the child's performance at school and on tests of mental ability. Subjects were 40 children and their mothers from a village near Utrecht, Netherlands. Videotape recordings were made of each child's mother and teacher performing two tasks with the child, resulting in 160 adult-child observations. In addition, parents were interviewed to assess their preferred communication strategies with their children, and children's cognitive competence and language functioning were measured by means of an intelligence test and the Language Assessment Instrument developed in 1978 by Blank and others. Children's classroom behavior was assessed with a rating scale which was completed by the teacher. An observation schedule was developed which incorporated several verbal and nonverbal aspects of communication behavior, including sequential structure, interactional mode, conceptual complexity of utterances, appropriateness of utterances, and verbal and nonverbal structuring and management behaviors. Analyses of the data on the 3-year-olds are reported. (RH)

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VERBAL ADULT-CHILD INTERACTION DURING TASKS

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INTRODUCTION

A basic tenet of this study is that conversations between parent and child are a major vehicle through which the parent acts as a teacher to the child, affecting many aspects of the child´s intellectual functioning, such as success at school. Children (3-6 yrs) begin their school careers with greatly differing language and communication skills. Some children even show deficiencies in these skills to such an extent, that they profit less than they should from teaching situations. The cause of these problems is thought to lie partly in the fact that language use and communication patterns at home are not well attuned to those at school (Tough, 1977; Wells, 1983; Tizard & Hughes, 1984; Wood, Mc Mahon & Cranstoun, 1980).

Many studies have been devoted to adult-child interaction in the age-period 0-3 years; however, very few studies have followed a representative sample of children through the preschool years into the infant school, assessing regularly verbal exchanges between parent/teacher and child in the context of instruction.

This study focuses on the following objectives:

1. A description of the main characteristics of the verbal interaction with mother and teacher as the children develop from 3 to 6 years of age.
2. An analysis of similarities and differences in styles of conversation between child and mother versus child and teacher, at each age during the four year-period.
3. Exploration of the relationship between parental communication strategies (observed during the parent´s conversation with the child during a task, as well as judged on the basis of an

interview with the parent), and the child's performance at school and on mental abilities tests.

METHOD

Subjects

The subjects were 40 children (20 boys, 20 girls) and their mothers from a village near Utrecht. At the start of the four-year longitudinal study, the target children were in the 3-year age range (38-44 months) and attended private nursery schools two days a week for half-day sessions. The children have been selected within a broad range of language skills, as determined by the P.P.V.T. and recommended by their teacher. The mothers and preschool teachers had been asked to participate in the four-year study 'designed to determine the range and growth of language and communication-skills of their children'.

Procedure

Each year of the study, a videorecording will be made of the mother-child and teacher child pair during a tasksetting in the preschool. Parent and teacher each performed two tasks with the same child. In the first year, one task was a puzzle (structured task), the other was bathing or clothing a doll (non structured task). Each task took about 10 minutes. Till now, the recordings at age 3 has been done - the recordings at age 4 are underway. The dialogues between parent/teacher and child are coded seperately for each task using an observation system (later in

this section). On this manner, each year 40 (children) x 2 (mother, teacher) x 2 (type of task), in total 160 adult-child observations have been collected for further analysis. Besides these observations, parents were interviewed to assess their preferred communication strategies with their children; cognitive competence and language functioning of the children were measured by means of an intelligence test and a Language Assessment Instrument (Blank, Rose & Berlin, 1978). Classroom behaviour of the children was assessed with a rating scale, completed by the teacher.

Measures and scoring.

The videotapes are transcribed verbatim with each transcript divided into conversational turns, that is continuous talking by one person, followed by talk of the other participant or by a definite pause or silence. Turns could be further devided into utterances. Utterances and turns were then coded in accord with the rules of the system.
Reliabilities based on percentage of agreement between pairs of eight coders were measured for each of the categories of the system. The observation-sessions to be reported here are those of the 3-years-olds only.

Observation system.

An observation schedule has been developed, incorporating several aspects (verbal as well as non-verbal):

1. Sequential structure: Initiation - Response - Follow up move.
   Source: Coding manual for the description of conversations, Wells & Gutfreund, 1984.
2. Interactional mode (communication-function): purpose of utterances in terms of broad categories like Control (regulation of behavior), Representational (exchange of information), Tutorial (didactic purpose), Feedback, and others.
   Source: Wells & Gutfreund, 1984.
3. Conceptual complexity of utterances (distancing strategies): four levels of abstraction along a continuüm of perceptual-language distance´; as the distance between the material being discussed and the language used to discuss the material (perceptions, experiences) widens, greater demands are placed on the child to abstract information from the material that is available to him. These four levels of abstraction are called: Matching experience, Selective analysis of experience, Reordening experience and Reasoning about experience.
   Sources: Blank & Franklin´s Cognitively based system of assessment for dialogue with preschoolers, 1980.
   Sigel & Flaughter´s Parent-Child Interaction Observation Schedule, 1980.
4. Appropriateness of utterances (responses): the appropriateness or adequacy of an utterance, given the previous speaker´s remarks. Subcategories such as Adequate, Inadequate, No response, Ambiquous, Refusal and others.
   Source: Blank & Franklin, 1980.
5. Verbal and non-verbal structurering and management behaviors: verbalizations which convey affection ad/or support to the

child, without making cognitive demands upon the child. E.g. Approval, disapproval. Also informational feedback or feedback with elaboration.

Source: Sigel & Flaughter, 1980.

This observation system has been applied primarily to verbal utterances of adult (parent, teacher) and child; non-verbal behavior that accompanied or followed the utterance, was coded with that utterance, e.g. when a child responds behaviorally to a command of mother, this non-verbal reaction of the child was coded as 'adequate'.

The system is hierarchical in nature, see Table 1.

The following interchange illustrates application of the coding-system: (mother and child in clothing a doll-task).

Time	Speaker	Code
1.30 Mother:	So, now she gets, her dress on	In./RP II
.34	First over her head	In./RP II
.36 Child:	Like this? (Child puts dress on upside-down)	Resp In./-;RP
.38 Mother:	No, that's upside down	Resp./+
.41	Like this (M. does it correctly)	In./F conf.
.43 Child:	Yes	Resp./F conf.
.44 Mother:	Now her arms in the sleeves again	In./RP II
.50	The arms in here (M. helps)	In./C struct.
.54	You do it	In./F app.
	C. tries) (Child:)	Resp./+ (nv)
.56	You have to pull (M. does it)	In./C struct.
	(Child:)	Resp. NOT (nv)
2.03	The other one, Martin! Come one!	In./C struct.

.06	Child:	Yes, this one (C. takes another garment)	Resp./-
.08	Mother:	No, this one (M. shows arm-hole)	RS/F ev.
.10		You have to pull	In/C struct.

The system has been developed, generally spoken, in order to search for differences in the way mothers and teachers are sensitive ('fine tuned') to the child's level of functioning during an instruction-setting, and to search for those components of dialogue between adult and child that foster development and functioning at school.

TABLE 1 ADULT-CHILD INTERACTION OBSERVATION SYSTEM

Dialoque structure

Initiate	(I)	: iniatiating the verbal exchange
Respond	(R)	: reaction (verbal or nonverbal)
Respond/Initiate	(R I)	: reaction recoded into initiative (effort to sustain the conversation)
Follow up response	(RS)	: follow-up reactions of initiator on previous response

Interactional mode (subcategories of INITIATE)

Control	(C)	: the control of present or future behaviour; see subcategories
Representational	(R)	: the exchange of information; see subcategories
Tutorial	(T)	: deliberately didactic purpose (c.q. questioning); see subcategories
Feedback	(F)	: reaction on previous performance, emotional support; see subcategories
Expressive	(E)	: expression of feelings/spontanious reactions
Social	(S)	: maintainance of social relationships (c.q. greetings)
Self-control	(Sc)	: self-directing use of language (c.q. monitoring actions)
Clarification	(C)	: request for repeat what other has said
Unanalysable	(Un)	:

Appropriateness of Response (subcategories of RESPOND):

Adequate	(+)	: response appropriately meets speaker-initiator´s verbalization.
Inadequate	(-)	: response is invalid, irrelevant or insufficient
Ambiguous	(±)	: response is unclear or ambiguous
No response	(Ø)	: no answer or behaviour is offered
No time to response	(NOT)	: initiator does not allow time for other participant to response
Feedback	(F)	: see above
Clarification	(C)	: see above
Refusal	(RF)	: refusal (verbaly) to react
Unanalysable	(Un)	

Level of abstraction subcategories of REPRESENTATIONALS + TUTORIALS)

Level 1 matching experience	(I)
Level 2 selective analysis of experience	(II)
Level 3 reordening experience	(III)
Level 4 reasoning about experience	(IV)
Rest-category	(R)

Regulation of behaviour (subcategories of CONTROLS)

Structuring of non-verbal taskbehaviour	(STR)
Idem with explanation	(STR+)
Attention getting/holding	(ATT)
Idem with explanation	(REG+)

Emotional support and informational feedback (subcategories of FEEDBACKS)

Approval	(APP)	: positive verbal feedback
Disapproval	(DIS)	: negative verbal feedback
Confirmation	(CON)	: reaffirming previous utterance, adding no information
Evaluation	(EV)	: elaborated response with expansions or explanations

PRELIMINARY RESULTS

The reliabilities were 85% or more for Dialogue structure, Interactional mode, and 70% or more for Level of complexity and Appropriateness of response. Coding the utterances into the four levels of abstraction prooved to be the most difficult.
Analysis of the dialogues of mother/teacher with child in both tasks resulted in the following main findings.

1. Total talk and dialogue structure

The 36,250 utterances of the present sample (n= 38 dyads, 3-years-olds) occurred at as a mean rate of 15.6 per minute per adult and 10.8 per child. Thus, the adult takes 60%, while the child takes 40% of total talk.

As can be seen in Figure 1: about 75% of the adult-utterances is in the form of an Initiative, whilst 65% of child-utterances is in the Response-category. The children initiated an exchange at a moderate percentage (about 32%), suggesting that the adults were leading the conversation, but that the children were active participants in the exchange.

Comparison between type of task and between mother and teacher (see Figure 1):

- Only minor differences in dialogue-structure could be demonstrated between the two task-settings and between mother and teacher

2. Communication-functions

Figure 2 shows the percentage of adult- and child-utterances in each of the main categories of communication-function of

the INITIATIVES. As can be seen adult's speech consist more of exchange of information, including teaching talk, than of control talk. Although the adults use a greater proportion of Representationals than the children, child initiatives consist mainly of Representationals.

Comparisons (see Figure 3):

- mothers use more control-talk than teachers
- teachers use more informative and teaching talk than mothers
- mothers give slightly more feedback to the child than teachers do
- structure of task does not make much difference in the distribution of adult-utterances in each category
- as to child utterances: teacher vs mother nor type of task do make a difference.

3. Appropriateness of responses

The percentages of adult- and child utterances in each of the Response-categories are shown in Figure 4. Most of the adult reactions to their child's Initiatives fall in the category Feedback (emotional support and/or informational feedback). As already noted, twice as many child-atterances than adult utterances are of a responsive nature, for the most part adequate responses.

Comparison (see Figure 5):

- with their teacher children give more adequate and less inadequate answers than with their mothers;
- the same picture shows up with regard to non-structured versus structured task;

- more feedbacks are given by the adult with the puzzle-task than with the doll-washing task (probably adult's reaction on the non-verbal handling of pieces of the puzzle by the child)

4. With regard to level of complexity, the behaviors of the adult and child were not parallel (see Figure 6 and 7). Mothers and teachers often used level II and III utterances whereas their 3-years-olds most often used level I and II utterances. These data support speculations that adults use levels of language that are somewhat beyond the child's level.

   Comparison:

   - with the puzzle more than 50% of the Representations was at level II (color, form, the fitting), whereas with the doll-washing/clothing the conversation was more evenly distributed over three levels of complexity.
   - the same can be said of the child-utterances: with the puzzle mainly level II utterances were used, whereas with the doll-task the utterances are more evenly distributed over the three complexity levels.

5. Emotional support and informational feedback

   As already noted, adult's use of Feedbacks far outweight child's use of this subcategory

   Comparison (see Figure 8):

   - mothers use more disapproval than teachers
   - teachers show a greater percentage of neutral/indirect forms of feedback: Confirmations

(Child-utterances parallel the adult-utterances in this respect)

- the unstructured task solicits more neutral/indirect feedbacks than the structured task

(Child utterances do not parallel adult utterances in this respect)

No interactional measures nor sequential analyses have been done till now. Also, no information is available yet about the correlation between the quality/nature of mother-child and teacher-child interaction, neither between dialogue-qualities and child-outcomes (cognitive functioning, classroom behaviour, school career).

References

Blank, M., S.A. Rose & L.J. Berlin, The Language of learning: the preschool years. New York: Grune and Stratton, 1978.

Blank, M. & Franklin, E., Dialogue with preschoolers: a cognitively based system of assessment. Applied Psycholinguistics, 1980, 127-150.

Hess, R.D., G.G. Price, W.P. Dickson, and M. Conroy, Different roles for mothers and teachers: contrasting styles of child care. In: S. Kilmer, Advances in Early Education and Day Care. Vol. 2. London: JAI-Press Inc., 1981.

Sigel, I. and J. Flaughter, Parent-Child Interaction Observation Schedule. Princeton: Educational Testing Service, 1980.

Tizard, B. and M. Hughes, Young Children Learning; Talking and thinking at home and at school. London: Fontana paperback, 1984.

Tough, J. The Development of Meaning. A study of Children´s Use of Language. London: George Allen and Unwin, 1979.

Wells, G. & M. Gutfreund, Coding Manual for the Description of Conversation. OISE, Toronto, 1984.

Wells, G., Talking with children: the complementary roles of parents and teachers. In: M. Donaldson, R. Grieve & C. Pratt (eds.), Early Childhood development and education. Oxford: Blackwell, 1983.

Wells, G., Learning through interaction: The study of Language development, Vol. I. Cambridge: Cambridge University Press, 1985.

Wertsch, J.V., The zone of proximal development: some conceptual issues. In: B. Rogoff and J.V. Wertsch (eds.), Cognitive growth in children: the zone of proximal development.

San Francisco: Jossey-Boss, 1984.

Wood, D., J.S. Bruner & G. Ross, The role of tutoring in problem-solving. J. Child Psychol. Psychiat., 1976, 17, 89-100.

Wood, D., L. McMahon and Y. Cranstoun, Working with Under Fives. London: Grant McIntyre, 1980.

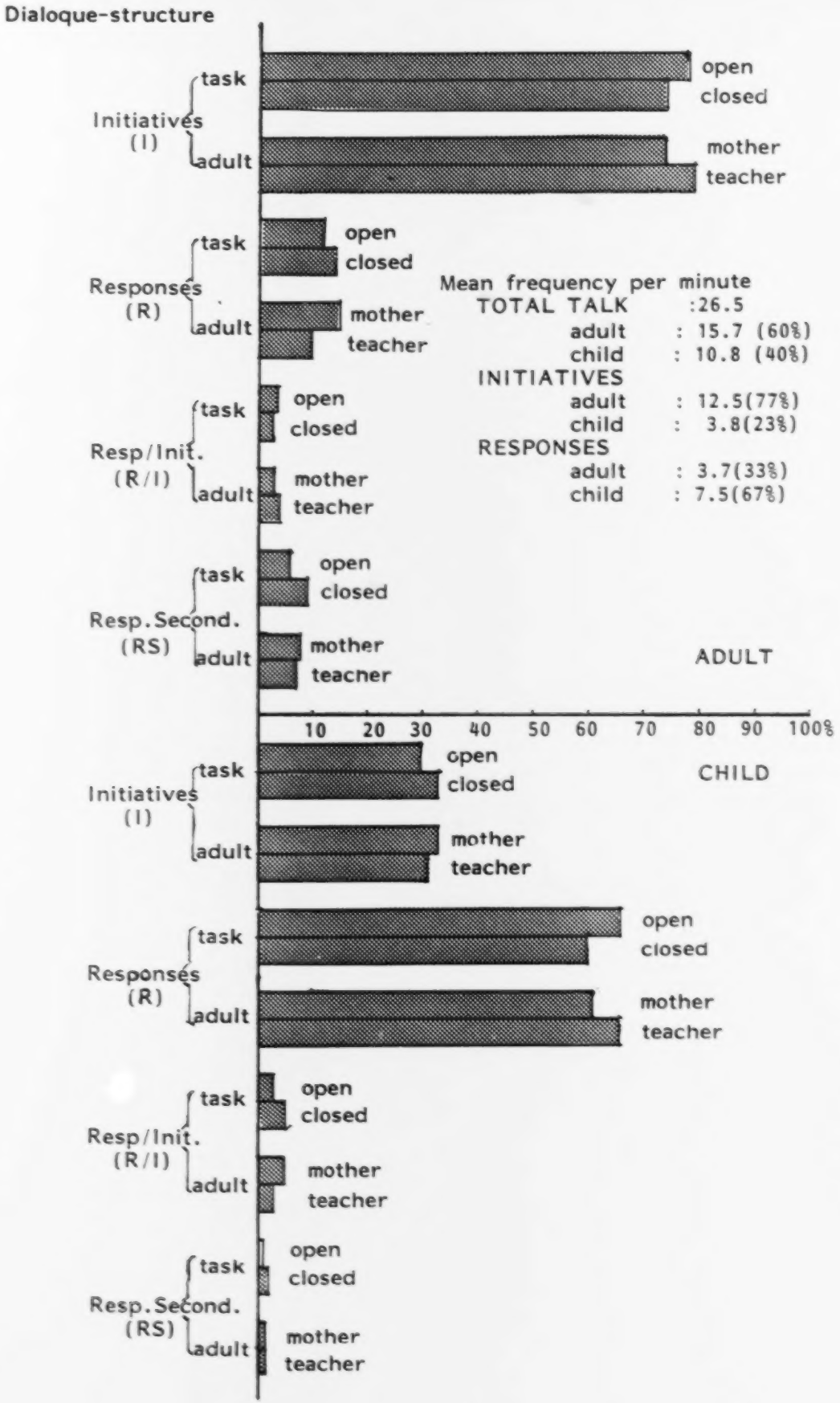

FIGURE 1 Comparison (mother vs teacher;open vs closed task) of percentages of utterances in each of the dialoque-structure categories; adult utterances above;child utterances down.

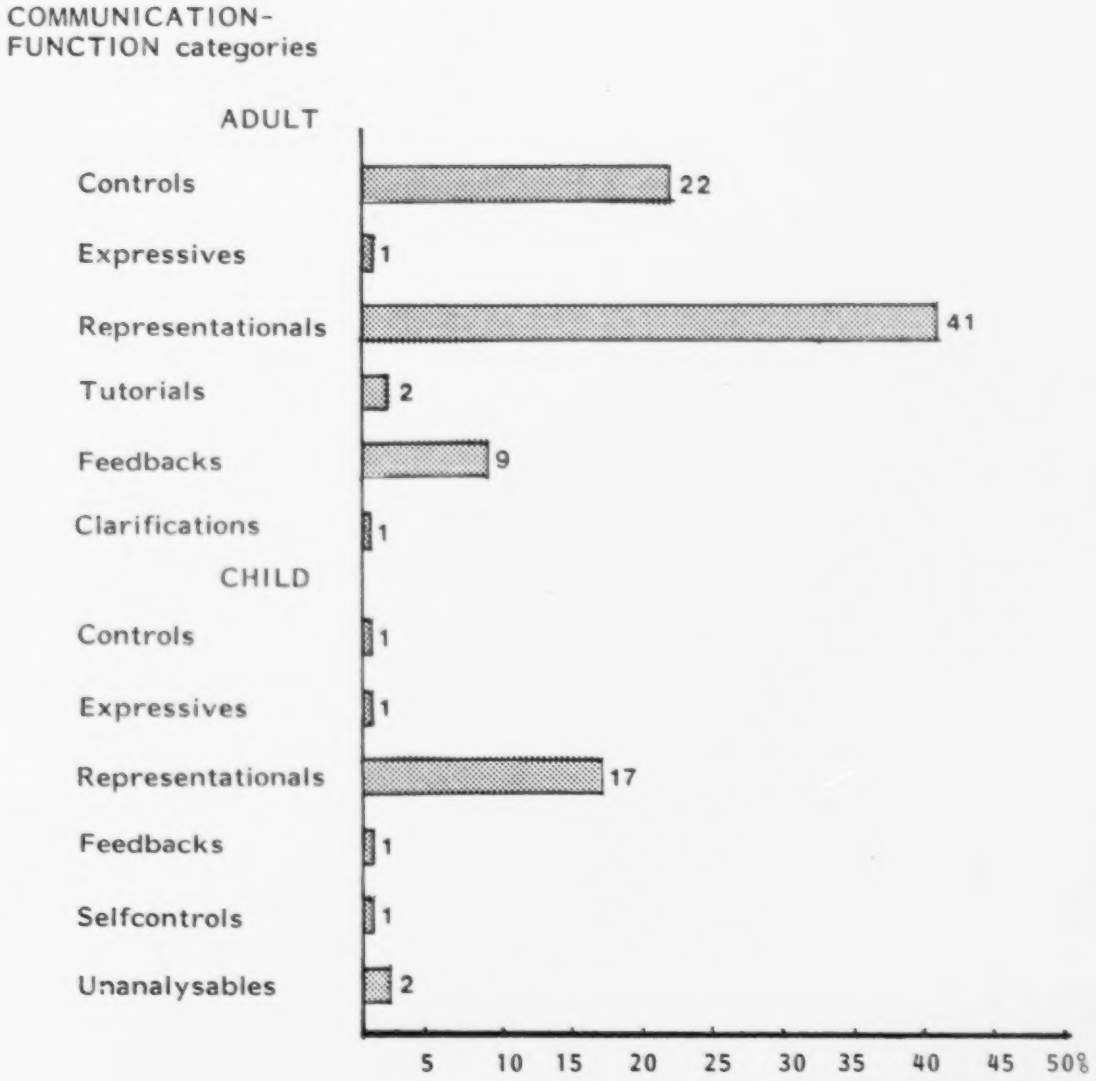

FIGURE 2 Percentage of predominantly spontaneous utterances in each of the subcategories of INITIATIVES;adult initiatives above,child initiatives down.

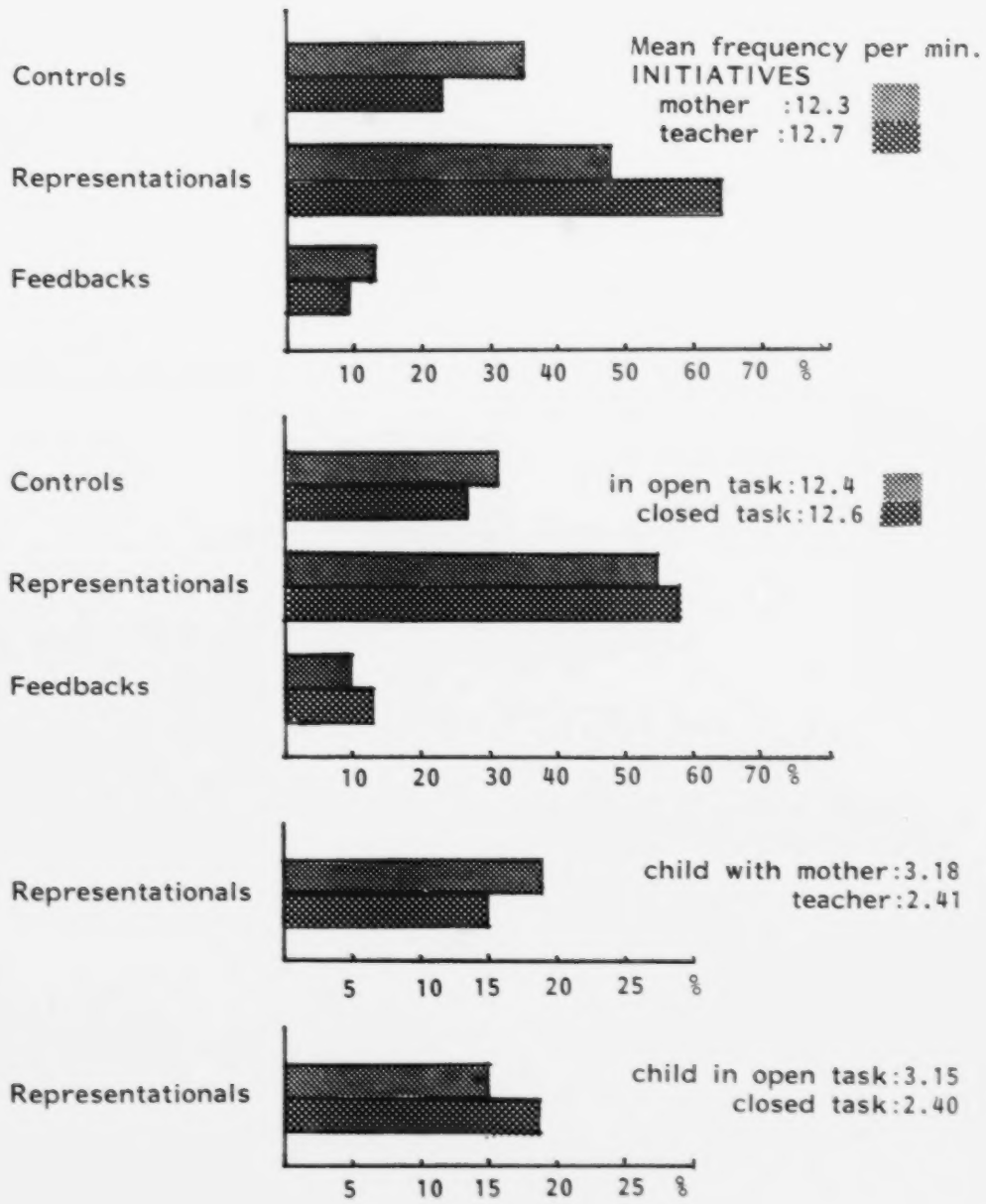

FIGURE 3 Comparison (mother vs teacher; open vs closed task) of percentages of utterances in several subcategories of INITIATIVES; adult initiatives above, child initiatives down.

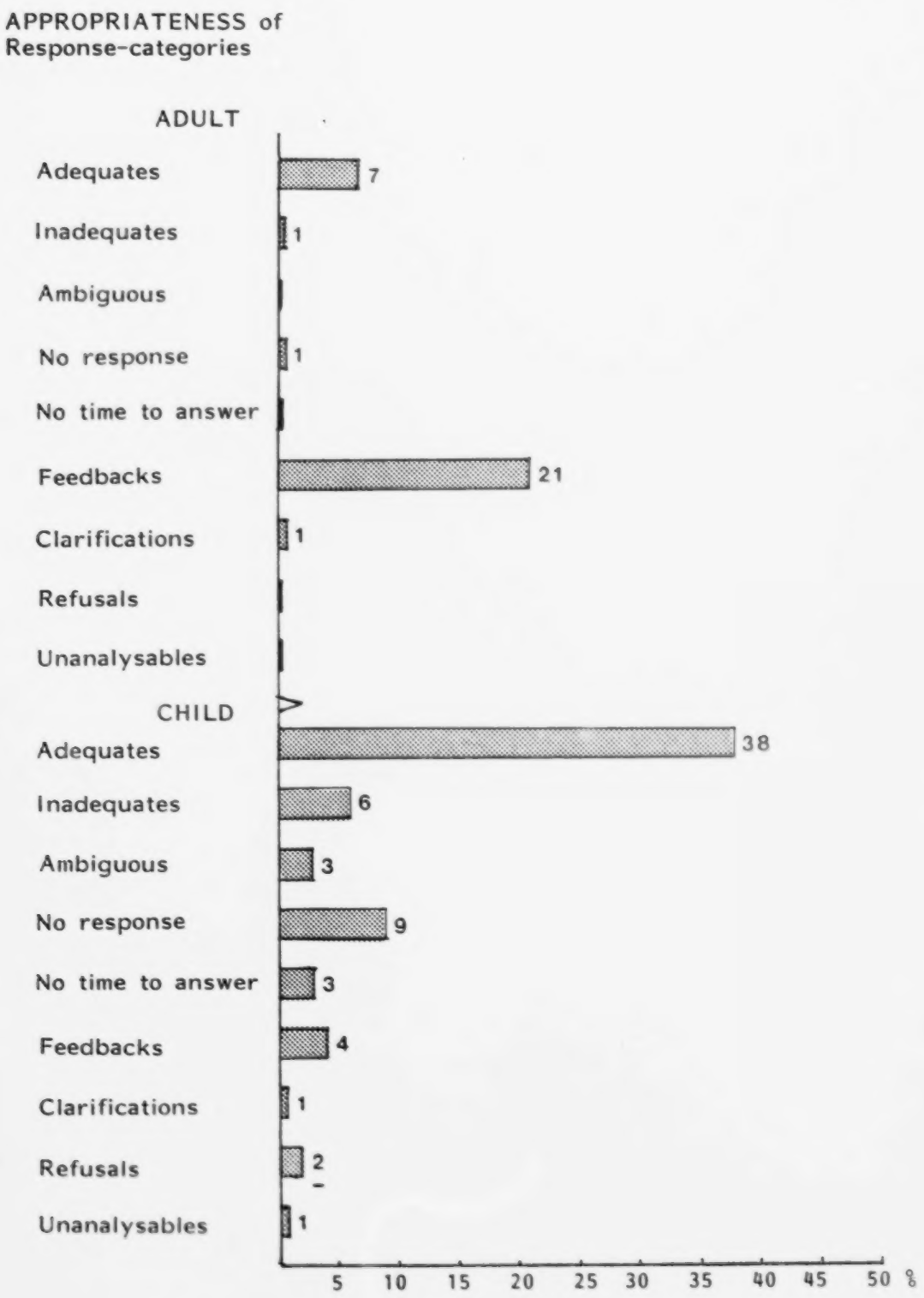

FIGURE 4 Percentage of predominantly responsive utterances in each of the subcategories of RESPONSES; adult responses above, child responses down

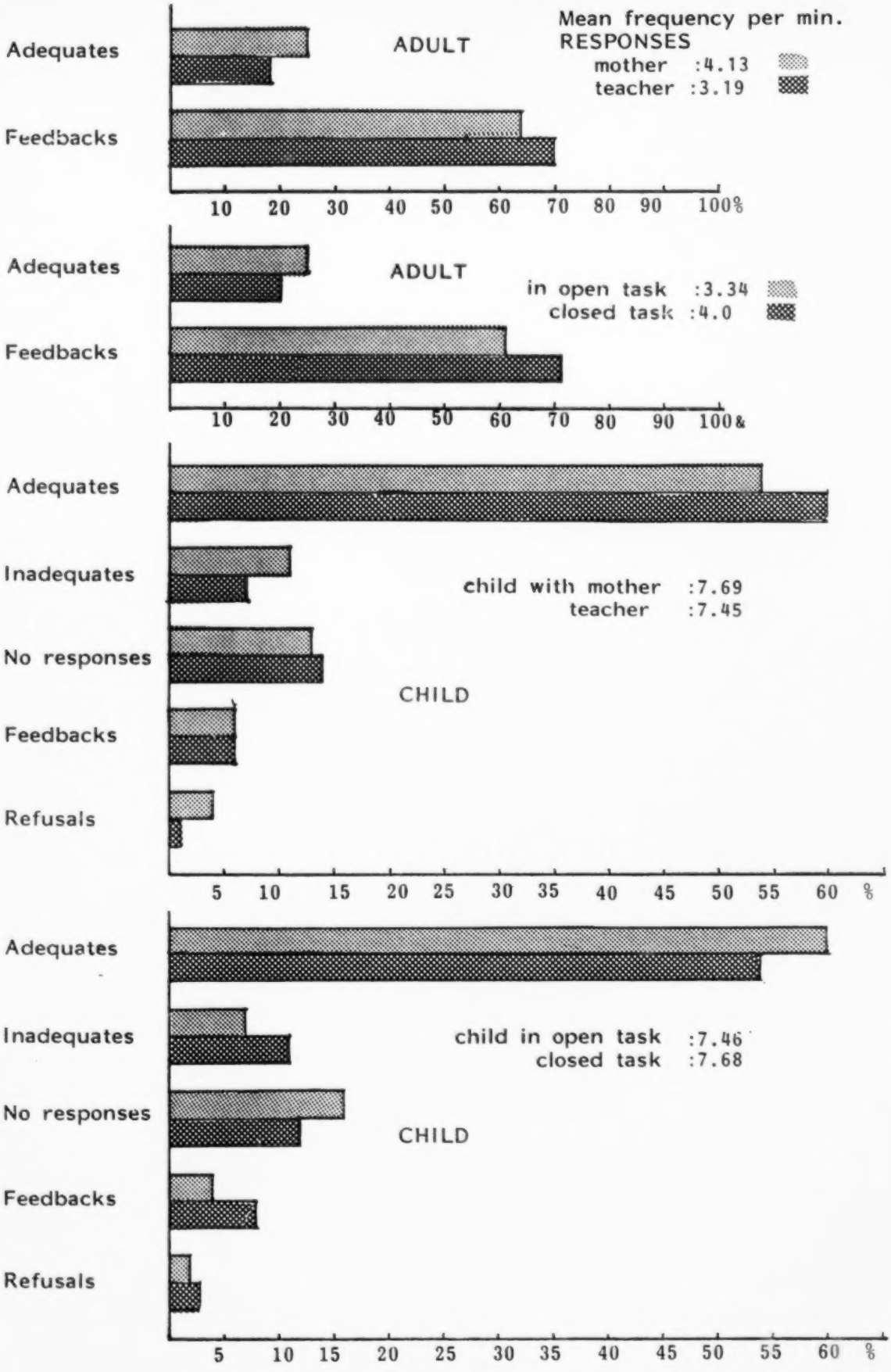

FIGURE 5 Comparison (mother vs teacher;open vs closed task) of percentages of utterances in several categories of RESPONSES; adult responses above, child responses down.

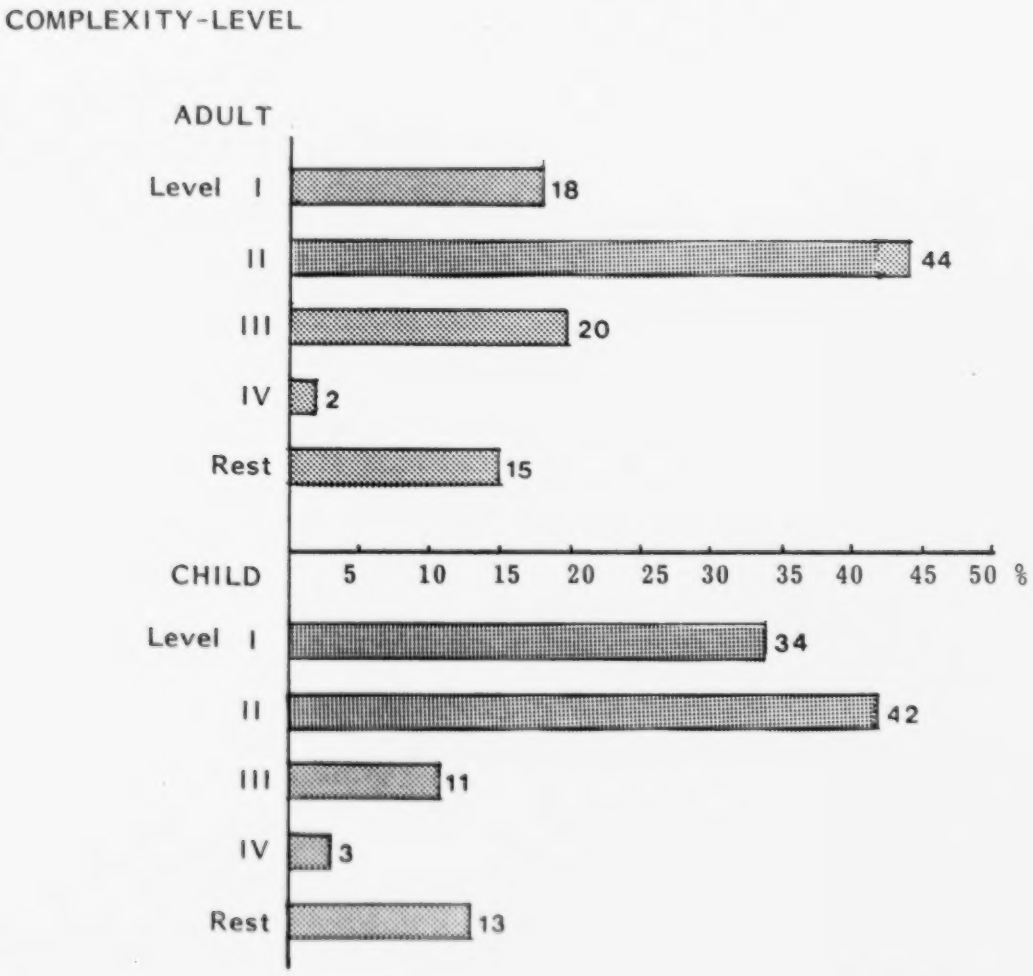

FIGURE 6 Percentage of ADULT (top)- and CHILD (down)-utterances in each of the COMPLEXITY- LEVELS.

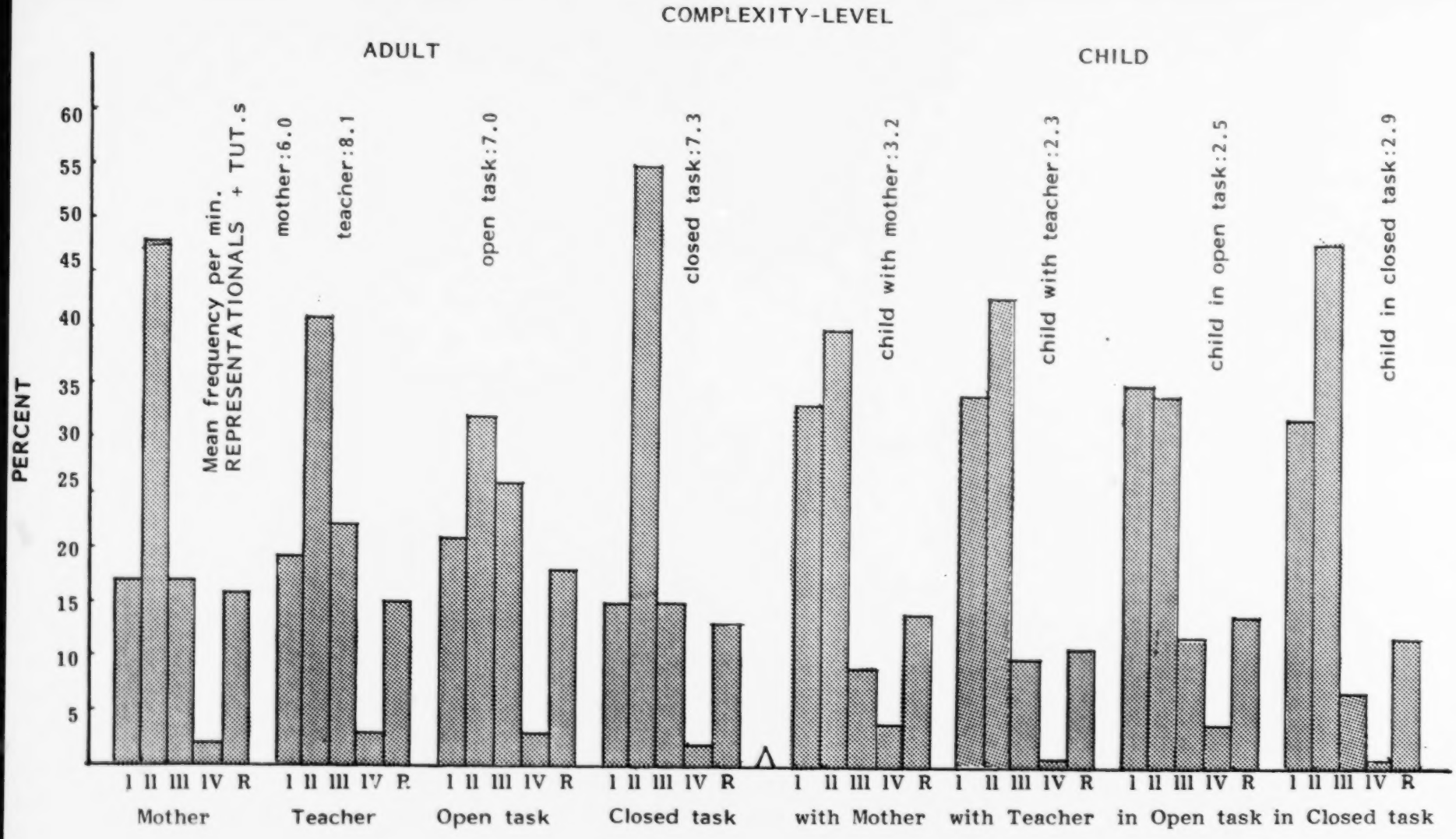

FIGURE 7 Comparison (mother vs teacher; open vs closed task) of percentage of ADULT-utterances (left) and CHILD-utterances (right) in the subcategories of REPRESENTATIONALS + TUTORIALS.

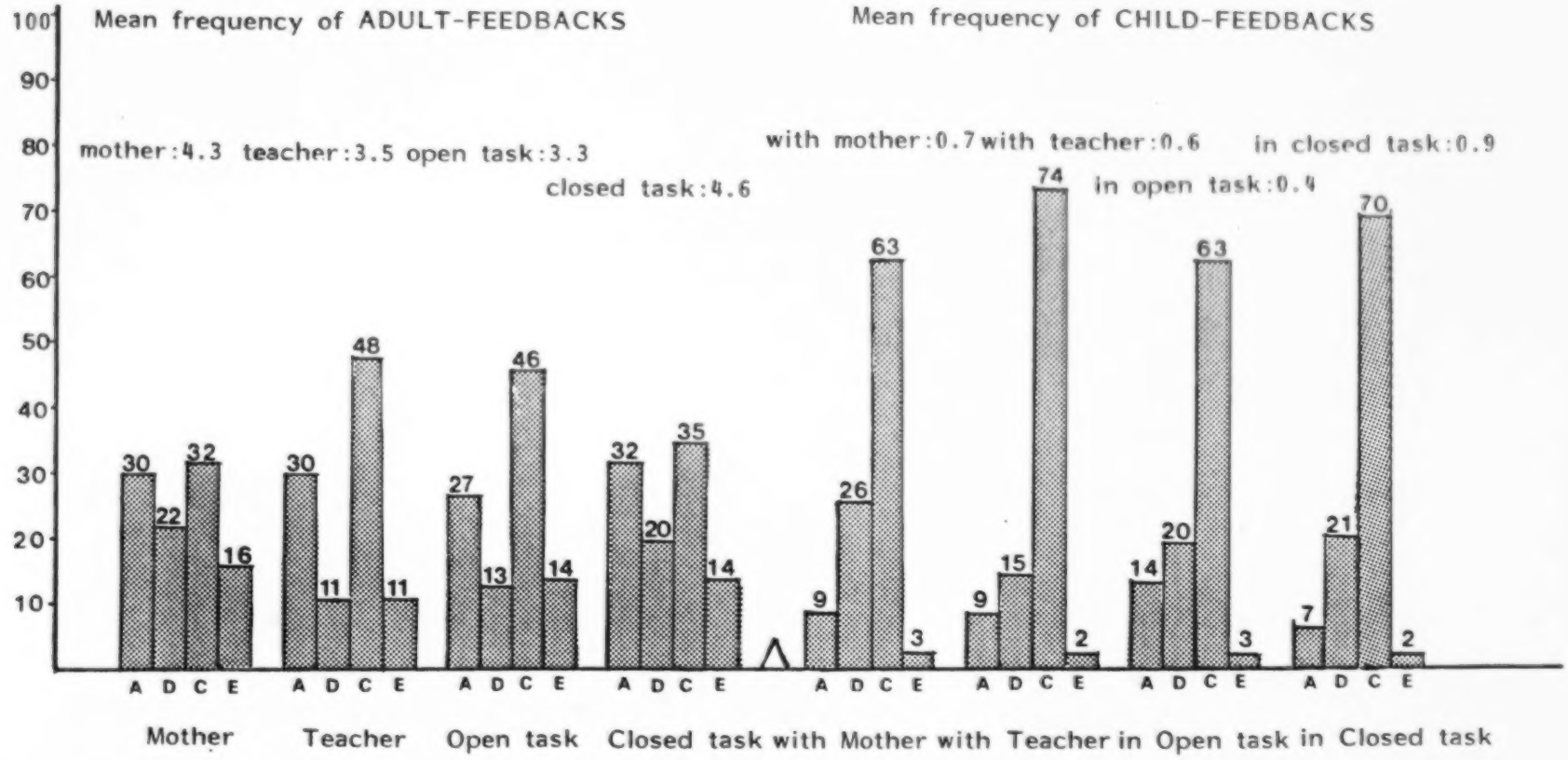

FIGURE 8 Comparison (mother vs teacher; open vs closed task) of percentages of ADULT (left)- and CHILD (right) - utterances within the subcategories of FEEDBACKS.